UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,095	03/26/2004	Herman Lee	112056-0152U	9717

24267	7590	07/17/2006

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EXAMINER
KO, DANIEL BOKMIN

ART UNIT	PAPER NUMBER
2189	

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/811,095	LEE ET AL.
	Examiner	Art Unit	
	Daniel B. Ko	2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _26 March 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-34_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-34_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 March 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _5/14/04, 7/12/04, 2/2/05, 5/5/06._

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This action is responsive to the application filed on 3/26/2004. Claims 1-34 have been submitted for examination.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 5/14/2004, 7/12/2004, 2/2/2005, and 5/5/2006 were considered by the examiner.

Specification

Please update the status and patent numbers of reference applications on pages 3 and 17-18 of specification as appropriate.

Claim Objections

Claims 1, 8, 27, and 28 are objected to because of the following informalities:

Claim 1 recites the limitation "the client" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the virtual target module" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 recites the limitation "the client" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "the client" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-7 and 29-34 are objected, because they depend from objected claims 1

and 28.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1.   Claims 1-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Grosner

et al. (U.S. Patent Application 2004/0078467 A1), hereinafter simply Grosner.

Regarding claims 1, 9, 12, 13, 17, 18, 19, 27, and 28, Grosner teaches a method

for proxying data access commands from a first storage system to a second storage

system in a storage system cluster, the method comprising the steps of:

receiving a data access command at the first storage system that is directed to

the second storage system (paragraphs 22, 308, 309);

forwarding the received data access command to the second storage system via

a cluster interconnect (paragraphs 22, 324);

processing the data access command at the second storage system (paragraphs

22, 217, 218);

returning a response from the second storage system to the first storage system

via the cluster interconnect (paragraphs 219, ; and

sending a response to the data access command to the client from the first

storage system (paragraphs 22, 717).

Regarding claims 2, 22, and 29, Grosner teaches a method wherein the storage

systems are storage appliances and wherein the data access command is received at a

proxy port associated with the first storage appliance (Fig. 31, paragraph 416).

Regarding claims 3, 23, and 30, Grosner teaches a method wherein the proxy

port comprises a physical port (paragraphs 346, 365).

Regarding claims 4, 24, and 31, Grosner teaches a method wherein the proxy

port comprises a virtual port associated with a physical port (paragraphs 349, 350, 356).

Regarding claims 5, 25, and 32, Grosner teaches a method wherein the

response comprises requested read data (paragraphs 194, 289, 308).

Regarding claims 6, 26, and 33, Grosner teaches a method wherein the

response comprises an acknowledgement of a write operation (paragraphs 296, 719).

Regarding claims 7 and 34, Grosner teaches a method wherein the response comprises a predetermined set of read data (paragraphs 194, 289, 308).

Regarding claims 8, 15, and 21, Grosner teaches a method wherein the cluster interconnect comprises a direct link between the first storage system and the second storage system (paragraphs 187, 333).

Regarding claim 10, Grosner teaches a system wherein the forwarding decision is based on a port to which the data access request is directed (paragraphs 22, 173, 199, 244, 413, 437).

Regarding claim 11, Grosner teaches a system wherein the forwarding decision is based upon a logical unit address contained within the data access request (paragraphs 153, 333, 440).

Regarding claims 14 and 20, Grosner teaches a storage appliance wherein the cluster interconnect comprises a fibre channel interconnect (paragraphs 10, 21, 79).

Regarding claim 16, Grosner teaches a storage appliance wherein the virtual adapter interfaces with a virtual interface emulation layer to provide remote direct

memory access capabilities for transferring or forwarding received data access

commands to the second storage appliance (paragraph 91, 103, 271, 333, 440, 892).
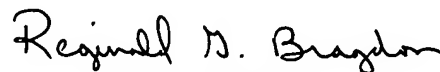
Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel B. Ko whose telephone number is 571-272-8194.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Reginald G. Bragdon can be reached on 571-272-4204. The fax phone

number for the organization where this application or proceeding is assigned is 703-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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